the chip and substrate bring to the circuit additional resistance, inductance and capacitance which can materially affect the performance of the chip. This problem is exacerbated when differential wiring pairs or traces carry the same or similar signals, but are out of phase with each other. This problem is minimized by providing that each trace of a differential wiring pair be adjusted to have (a) a pitch or distance therebetween substantially equal to or less than a ball pitch as defined at page 2, lines 12ff, (b) to be parallel for the maximum possible distance, (c) to each be as close as possible to the same length, and (d) to have the same cross-sectional geometry to the closest extent possible. It is also necessary that each trace of the differential pair be equally spaced from the ground plane in the event a ground plane is present, though this feature is not claimed at present. All of the above features are found in claim 1..

The central issue in the subject appeal, according to the Remand, is whether Ohsawa describes "each trace of each of said pair of traces being spaced from the other trace of said pair by up to a ball pitch, being maximized for identity in length and having up to one ball pitch difference in length and being maximized for parallelism and spacing". It is respectfully submitted that the other features discussed above as items (b), (c) and (d) are also issues in this appeal both individually and in combination and are also not found in Ohsawa as will be demonstrated hereinbelow.

It is initially noted that the Examiner's Answer does not include the figures referred to in the first paragraph on page 2 of the Remand and does not include a page 10. It is therefore assumed that reference is being made to the SUPPLEMENTAL EXAMINER'S ANSWER and any comments will be based upon this assumption.

The Remand states that the Examiner's comments are not readily understood. It is presumed that the Board is ordering the Examiner to clarify his comments since appellants have no way of determining that which the Examiner intended to convey and is in no better position than the Board.

With reference to the appellants' explanation of Ohsawa, the position of appellants is believed to be quite clear. Claim 1 call for a method of laying out traces for connection of bond pads of a semiconductor chip to a ball grid array disposed on a substrate wherein there are *a plurality of pairs of traces* (as defined at page 4, lines 4ff), each trace of each of the pair of traces having certain properties as defined in (b) of claim 1 and enumerated above. Nowhere in Ohwawa is there a statement that each of the traces of a pair of traces are spaced apart by up to a ball pitch as defined in the specification of the subject disclosure. There is nothing in Ohsawa which "reasonably appears to disclose a pair of traces whose spacing is not greater than the ball pitch". Nowhere does Ohsawa make such a statement and the drawings, according to the case law which has been the law for at least the more than 50 years that the undersigned has been in patent practice both as an Examiner and as an attorney, are not to scale and cannot be relied upon in such manner.

With reference to the Examiner's discussion on page 10 of the SUPPLEMENTAL EXAMINER'S ANSWER, and with reference to the box numbered 1., no "Y" is shown in the drawing, however it has not been shown in the figure (even assuming reference to dimensions in the figure were proper, which it is not) that there is "a plurality of pairs of traces on said surface, ... each trace of each of said pair of traces being spaced from the other trace of said pair by up to a ball pitch". No "pairs of traces" are stated to be present

in the figure and there is nothing to show that there are any pairs of traces up to a ball pitch apart or even that the traces are parallel and there is no statement that the traces are maximized for identity in length. The traces in the figure appear to traverse toward the central portion of the base each at a different angle. Therefore, there can be no parallelism as claimed and there is no maximization as to identity in length.

With reference to the box numbered 2., the traces referred to but not shown as L1 and apparently represented by the double arrow are not "pairs of traces" as defined in the specification of the subject application and are not maximized for parallelism and spacing except for the unsupported allegation of the Examiner, which has no basis in the record. There is no evidence in the specification of Ohsawa that such features are present or are contemplated by Ohsawa.

With reference to the box numbered 3., it is not clear from the drawing on above noted page 10 as to where the arrow extends. There is also no L2 in the drawing. There is no disagreement that, in the drawing, some of the traces appear to be within a ball pitch apart. However, as noted above, dimensions in the drawings cannot be considered and, in any event, this is only one of four features required to be present both individually and in combination. Furthermore, the claims require that there be provided *a plurality of pairs of traces which are spaced up to a ball pitch apart*. The terms "a plurality of pairs of traces" is defined at page 4, lines 4ff of the specification in the subject application. No such feature is found I Ohsawa.

With reference to the box numbered 4., arrows X and Y cannot be found on the above noted page 10. In this case, again, there is nothing in the record to show that the traces referred to are a "pair" is defined in the specification as discussed above or that

they comport with the requirements of claim1. The remainder of the alleged explanation in that box cannot be understood.

With reference to the box numbered 5., it appears that the discussion above as to boxes 1 to 4 applies.

In view of the above discussion as well as the discussion in the prior filed Briefs, reversal of the final rejection and allowance of the claims on appeal is urged that justice be done in the premises.

Respectfully submitted,

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